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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,003	04/20/2001	Lakshmi Kutty Cheeniyil	70006400-1	2741

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HEWLETT-PACKARD COMPANY
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EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/839,003

Applicant(s)

CHEENIYIL ET AL.

Examiner

Kenneth Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the Amendment on 8/20/04. Applicant's arguments have been fully considered but were not found to be persuasive.
2. Claims 1-10 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tarumi (US 6,115,640).**

4. As to claim 1, Tarumi teaches a method for managing a workflow process to bring execution time for said process at least closer to an expected deadline, said process including a plurality of work nodes and a set of priority levels associated with each work node (*see Abstract, col. 1, lines 48-54, col. 2, lines 18-23*), said method including the steps of:

generating for each work node a set of expected time to complete (ETC) (deadline or finish time or completion time) values for each priority level, each ETC value denoting a cumulative time to complete the process including the time taken by the corresponding node to complete its activity for a selected priority level (*col. 3, lines 30-33, col. 4, lines 10-33*);

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selecting for each work node a priority level that has a corresponding ETC value to meet said expected deadline (*col. 3, lines 30-33, col. 4, lines 38-48, and col. 5, lines 22-26*); and

executing activities associated with said work nodes in accordance with said selected priority levels, thereby bringing execution time for said process at least closer to said expected deadline (keep the deadline) (*col. 5, lines 12-43*).

Tarumi teaches altering the priority level to meet the expected deadlines but fails to explicitly teach that this is based on the ETC values that are less than or equal to a remaining time available. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature selecting (or having a higher priority) for an ETC value less than or equal to a remaining time available because this will ensure that the deadline will be met. If a selection was made for an ETC value greater than a remaining time available, the deadline would not be met.

5. As to claim 2, Tarumi teaches wherein each priority level is selected so that the difference between said deadline and the ETC value is a minimum (*col. 10, lines 34-37*).

6. As to claim 3, Tarumi teaches wherein said ETC values are generated from historical data collected from completed process instances during a learning phase (*col. 4, lines 34-37*).

7. As to claim 4, Tarumi fails to explicitly teach a method wherein said ETC values are generated using formula $ETC = n + 2c$ and wherein n is a statistical mean and c is a statistical standard deviation of values collected during a learning phase. However, it is well known in the

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art of probability theory of the elementary formula $ETC = n + 2c$ and it would be obvious to one of ordinary skill in the art to include this feature to the existing system of Tarumi in order to determine an expected time to complete value given the mean and standard deviation parameters.

8. As to claim 5, Tarumi teaches a method according to claim 1 wherein said executing is performed by at least one business object (*col. 1, lines 11-13*).

9. As to claim 6, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Tarumi fails to explicitly teach meeting the expected deadlines with a high probability. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of meeting the expected deadlines with a high probability because it would be very desirable to stay on schedule and not miss any deadlines.

10. As to claim 7, it is rejected for the same reasons as stated in the rejection of claim 2.

11. As to claim 8, it is rejected for the same reasons as stated in the rejection of claim 3.

12. As to claim 9, it is rejected for the same reasons as stated in the rejection of claim 4.

13. As to claim 10, it is rejected for the same reasons as stated in the rejection of claim 5.

Response to Arguments

14. As a result of Applicant's amendment of the claims, the Examiner's 35 U.S.C. 112 2nd paragraph rejection has been removed.

15. Applicant argues on page 6 that Tarumi does not teach or suggest the step of "generating for each work node a set of expected time to complete (ETC) values for each priority level, ..."

In response, the Examiner respectfully disagrees. Tarumi teaches a workflow definition (generation) means that generates definitions for each work node and the work definitions include priorities and deadline/finish time/completion time (expected time to complete) (*col. 4, lines 7-13, etc.*). In Tarumi's invention, all priorities are based on the deadline/finish time/completion times (*col. 1, lines 48-54*).

16. Applicant argues on page 6 that Tarumi does not teach or suggest the step of "selecting for each work node a priority level that has a corresponding ETC value ..."

In response, the Examiner respectfully disagrees for the same reasons mentioned above in #14. Again, priority is defined (generated) and used (selected) by the workflow definition means (*col. 4, lines 7-13, etc.*), whereby the definitions are based on the deadline times (ETC values) (*col. 1, lines 48-54*).

17. Applicant argues on page 7 that Tarumi does not teach that the appropriate priority levels for each work node is first selected such that the deadline could be met by the workflow process when executed at the selected priority levels, and subsequently, the workflow process is executed at the selected priority level.

In response, the Examiner respectfully disagrees for the same reasons mentioned above in #14. Again, priority is defined (generated) and used (selected) by the workflow definition means

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(*col. 4, lines 7-13, etc.*), whereby the definitions are based on the deadline times (ETC values) (*col. 1, lines 48-54*). In addition, Tarumi teaches the workflow process is executed at the selected priority level (*col. 1, lines 48-54*).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt

11/03/04


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